

GUJARAT TECHNOLOGICAL UNIVERSITY**Diploma Engineering - SEMESTER-V • EXAMINATION – WINTER 2013****Subject Code: 3335505****Date: 04-12-2013****Subject Name: Fabrication Technology - 1****Time: 02:30 pm - 05:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. English version is considered to be Authentic.

- Q.1** (a) Explain in brief : with neat sketch a elements / parts of roof truss. **07**
 (b) Explain the process of gas cutting in detail with neat sketch and label its elements. **07**
- Q.2** (a) Classify the various types of structural steel fabrication industries. **07**
 (b) Draw a neat sketch of a square frame made by following methods 45° fit-up and set-up prepare a bill of material (B. O. M.) for it. **07**
 Calculate the total cost of job if the material
 Cost of angle material = 100 Rs/kg , labour cost = 30 Rs / kg ,
 Assume other cost are negligible.
- OR**
- (b) Explain in brief : with neat sketch structural fabrication Terminology (Any -7) **07**
- Q.3** (a) Prepare a geometrical construction under following condition by using compass, ruler but without protector. Write the steps of construction for it. **07**
 Draw an angle without using protector ($\angle CAB=180^{\circ}$) and divide this angle in to $\theta_1=30^{\circ}$, $\theta_2=45^{\circ}$, $\theta_3=90^{\circ}$, $\theta_4=120^{\circ}$, $\theta_5=60^{\circ}$
 (b) Draw neat sketch and explain them in brief : **07**
 the right [correct] and wrong working [in-correct] of files
- Q.3** (a) Explain in brief with neat Sketch terminology of bolts. **07**
 1. Classify Types of bolts
 (b) Define and explain the process of
 1) Lining, 2) leveling, 3) plumbing, 4) Alignment ,
- Q.4** (a) Structural Fit-up & Set-up Of Channel (C - section) **07**
 (b) Draw neat sketch Trammels and explain them in brief
- OR**
- Q.4** (a) List / classify the different types of joining process **07**
 Compare Welding and casting
 (b) List out the name of Third party inspection agencies with their abbreviation. **07**
 Explain in brief their Field or Area of working /operations /servicing rendering.
- Q.5** (a) Classify the various standard Mechanical fasteners / fastening item. **07**
 Classify and Explain in brief with neat Sketch
 : various type of jacks used in industries
 (b) 1. Classify the various types of punches.

2. Draw their neat sketch Label its element.
- 3 States its typical application

OR

- Q.5** (a) Find out the COST & weight of following sections for 5 m. length
 (Take density/ sp. weight of material = 7.85 gm/ cm^3)
 (Take cost of material = 110 RS./ kg) All Dimensions Are In mm

07

Data For I- Section :-

Sr no.	Dimension In Mm				X - Area Cm^2	Volum e Cm^3	Weight	Cost in Rs.
	H	B	t_w	t_f				
1	150	75	5	8				

- (b) Explain in brief :- Column fabrication & assembly

07
